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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/618,343	07/10/2003	Kouji Uno	SIC-03-018	5238
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Please find below and/or attached an Office communication concerning this application or proceeding.

H-7

Office Action Summary	Application No. 10/618,343	Applicant(s) UNO, KOUJI	
	Examiner Hal I. Kaplan	Art Unit 2836	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 10 July 2003.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-31 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-3 and 6-31 is/are rejected.
- 7) ☒ Claim(s) 4 and 5 is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☒ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 10 July 2003 is/are: a) ☐ accepted or b) ☒ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date <u>6/14/04</u> . | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Priority

1. Receipt is acknowledged of papers submitted under 35 U.S.C. 119(a)-(d), which papers have been placed of record in the file.

Specification

2. The disclosure is objected to because of the following informalities: Paragraph 38, line 3 contains the word "signal". It appears this should be "signals". Paragraph 48, line 6 contains the phrase "in a step S32". It appears this should read "in step S32".

Appropriate correction is required.

Drawings

3. The drawings are objected to because of the following informalities: In Figure 10, steps S22, S25, S27, and S29 contain the phrases "BL, HL ON?", "BL, HL OFF?", "HL OFF" and "HL ON", respectively. It appears these should read "BL, HL, TL ON?", "BL, HL, TL OFF?", "HL, TL OFF" and "HL, TL ON" (see Specification, paragraphs 45 and 46). In Figure 12, the words "Yes" between steps S54 and S56 and "No" between steps S54 and S55 are missing.
4. The drawings are objected to as failing to comply with 37 CFR 1.84(p)(5) because they do not include the following reference sign(s) mentioned in the description: 18b in Figure 1 (see paragraph 23, line 8).
5. The drawings are objected to as failing to comply with 37 CFR 1.84(p)(5) because they include the following reference character(s) not mentioned in the description: 18 in Figures 3, 4, and 6; V1 and V2 in Figure 8; V1, and V2 in Figure 14;

V1 and V2 in Figures 15 and 17; V1, V2, and R1a in Figure 16; and V1, V2, and R5 in Figure 18. Corrected drawing sheets in compliance with 37 CFR 1.121(d), or amendment to the specification to add the reference character(s) in the description in compliance with 37 CFR 1.121(b) are required in reply to the Office action to avoid abandonment of the application. Any amended replacement drawing sheet should include all of the figures appearing on the immediate prior version of the sheet, even if only one figure is being amended. Each drawing sheet submitted after the filing date of an application must be labeled in the top margin as either "Replacement Sheet" or "New Sheet" pursuant to 37 CFR 1.121(d). If the changes are not accepted by the examiner, the applicant will be notified and informed of any required corrective action in the next Office action. The objection to the drawings will not be held in abeyance.

Claim Objections

6. Claim 1 is objected to because of the following informalities: Claim 1, line 1 contains the word "bicyle". It appears this should be "bicycle". Claim 1 line 2, the phrase "the power supply" lacks proper antecedent basis. Appropriate correction is required.

7. Claim 3 is objected to under 37 CFR 1.75(c), as being of improper dependent form because it depends from itself. Applicant is required to cancel the claim(s), or amend the claim(s) to place the claim(s) in proper dependent form, or rewrite the claim(s) in independent form.

Claim Rejections - 35 USC § 112

8. The following is a quotation of the first paragraph of 35 U.S.C. 112:

Art Unit: 2836

The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.

9. Claims 7 and 24-31 are rejected under 35 U.S.C. 112, first paragraph, as failing to comply with the enablement requirement. The claim(s) contains subject matter which was not described in the specification in such a way as to enable one skilled in the art to which it pertains, or with which it is most nearly connected, to make and/or use the invention.

Claims 7 and 30 recite the limitation "a transistor coupled to a node between the first resistance and the second resistance". As shown in Figure 13, when the first and resistance and the second resistance are coupled in parallel, the switch comprises a transistor connected to one end of the first resistance, in series with the first resistance, not connected to a node between the first resistance and the second resistance (see Specification, paragraph 57, line 3).

Claim 24 recites the limitation "the voltage arising from the base-emitter voltage of the second transistor is applied to a node between the resistance and collector and emitter terminals of the first transmitter. It is unclear what is being claimed. A node can be between the resistance and the collector terminal, or between the resistance and the emitter terminal, but not both, unless the collector and emitter terminals are connected to each other, which is not disclosed in any embodiment. Claims 25-31 inherit this deficiency.

Claim Rejections - 35 USC § 102

10. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

11. Claims 1, 2, 8, 9, 12, and 13 are rejected under 35 U.S.C. 102(b) as being anticipated by the US patent of Hipp (5,998,928).

As to claim 1, Hipp, drawn to a lighting intensity control system, teaches, in Figure 1, a circuit read on the claimed circuit comprising: a current supply circuit (20) that supplies DC current from the power supply (16) to the load device along a current path (see column 2, lines 44-51); and a current limiting circuit (15) that includes an active resistance circuit (15) that limits electrical current flowing through the current supply circuit (20) when voltage applied to the current limiting circuit (15) is above a minimum value (see column 2, lines 23-25 and column 3, lines 45-47).

As to claim 2, the circuit of Hipp further comprises a varying circuit (29) that varies an amount of current limiting provided by the current limiting circuit (15) (see column 3, line 36 through column 4, line 6).

As to claim 8, the varying circuit of Hipp varies an amount of current provided by the current limiting circuit (15) in a continuous manner (see column 2, lines 33-43).

As to claim 9, the circuit of Hipp further comprises an on/off control circuit coupled to the current supply circuit (16) for selectively switching the current supply circuit (20) on and off (see column 2, lines 45-46).

As to claim 12, the circuit of Hipp further comprises an LED (14) coupled for receiving the current from the current supply circuit (16) (see column 2, lines 23-25).

As to claim 13, the circuit of Hipp further comprises a light bulb (12) that includes a filament coupled for receiving the current from the current supply circuit (16) (see column 2, lines 20-21).

12. Claims 1-3, 6, 9, and 14 are rejected under 35 U.S.C. 102(b) as being anticipated by the US patent of Lee (5,818,172).

As to claim 1, Lee, drawn to a lamp control circuit having a brightness condition controller having 2nd, 3rd, and 4th current paths, teaches, in Figures 3 and 4, a circuit read on the claimed circuit comprising: a current supply circuit (2) that supplies DC current from the power supply to the load device along a current path (see column 4, lines 52-55); and a current limiting circuit (6) that includes an active resistance circuit (R61) that limits electrical current flowing through the current supply circuit (2) when voltage applied to the current limiting circuit (6) is above a minimum value (see column 5, lines 59-65).

As to claim 2, the circuit of Lee further comprises a varying circuit (11) that varies an amount of current limiting provided by the current limiting circuit (6) (see column 6, line 27 through column 7, line 6).

As to claim 3, the varying circuit of Lee varies an amount of current limiting provided by the current limiting circuit (6) by a plurality of discrete values (see column 6, line 27 through column 7, line 6).

As to claim 9, the circuit of Lee further comprises an on/off control circuit (5) coupled to the current supply circuit (6) for selectively switching the current supply circuit (16) on and off (see column 4, lines 62-64).

As to claim 14, the circuit of Lee further comprises a backlight (4) for a liquid crystal display device (14), wherein the backlight (4) is coupled for receiving the current from the current supply circuit (16) (see column 4, lines 59-62).

13. Claims 1, 9, 12, and 18-23 are rejected under 35 U.S.C. 102(b) as being anticipated by the French patent of Alain (FR 2,763,203).

As to claim 1, Alain, drawn to an LED power supply circuit, teaches, in Figures 3 and 4, a circuit read on the claimed circuit comprising: a current supply circuit (11) that supplies DC current from the power supply to the load device along a current path; and a current limiting circuit (12) that includes an active resistance circuit that limits electrical current flowing through the current supply circuit (11) when voltage applied to the current limiting circuit (12) is above a minimum value (see column 5, lines 59-65).

As to claim 9, the circuit of Alain further comprises an on/off control circuit coupled to the current supply circuit (11) for selectively switching the current supply circuit (11) on and off.

As to claim 12, the circuit of Alain further comprises an LED (10) coupled for receiving the current from the current supply circuit.

As to claim 18, the current supply circuit of Alain comprises a first transistor (T1) structured to receive current from the power supply and provide current to the load device.

As to claim 19, the current limiting circuit of Alain comprises a second transistor (T3) coupled to the first transistor (T1) to control a current flowing through the first transistor (T1).

As to claim 20, the first transistor of Alain comprises a first bipolar transistor (T1), and the second transistor comprises a second bipolar transistor (T3).

As to claim 21, in the circuit of Alain, a voltage arising from a base-emitter voltage of the second transistor (T3) is applied to the current path.

As to claim 22, the current limiting circuit of Alain further comprises a resistance (R2) disposed in the current path.

As to claim 23, in the circuit of Alain, the voltage arising from the base-emitter voltage of the second transistor (T3) is applied to a node between the resistance (R2) and the first transistor (T1).

14. Claims 1, 10, 11, and 13 are rejected under 35 U.S.C. 102(b) as being anticipated by the US patent of Mosteller, Jr. (4,379,237).

As to claim 1, Mosteller, Jr., drawn to a light intensity control device and circuit therefor, teaches, in Figure 1, a circuit read on the claimed circuit comprising: a current supply circuit (B1,B2,C1) that supplies DC current from the power supply to the load device along a current path (see column 3, lines 1-4); and a current limiting circuit (10,R1,R2,R3,R14) that includes an active resistance circuit (R1,R2,R3,R14) that limits electrical current flowing through the current supply circuit (B1,B2,C1) when voltage applied to the current limiting circuit (10,R1,R2,R3,R14) is above a minimum value (see column 3, lines 17-28).

Art Unit: 2836

As to claim 10, in the circuit of Mosteller, Jr., the current limiting circuit (10,R1,R2,R3,R14) comprises a field effect transistor (10) with a resistance (R2) coupled between a gate terminal and a source terminal thereof (see column 3, lines 6 and 17-28, and Figure 1).

As to claim 11, the resistance of the current limiting circuit (10,R1,R2,R3,R14) of Mosteller, Jr., comprises a variable resistance (R2) (see column 4, lines 60-61 and Figure 1).

As to claim 13, the circuit of Mosteller, Jr. further comprises a light bulb (20) that includes a filament coupled for receiving the current from the current supply circuit (B1,B2,C1).

Claim Rejections - 35 USC § 103

15. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

16. The factual inquiries set forth in *Graham v. John Deere Co.*, 383 U.S. 1, 148 USPQ 459 (1966), that are applied for establishing a background for determining obviousness under 35 U.S.C. 103(a) are summarized as follows:

1. Determining the scope and contents of the prior art.
2. Ascertaining the differences between the prior art and the claims at issue.
3. Resolving the level of ordinary skill in the pertinent art.
4. Considering objective evidence present in the application indicating obviousness or nonobviousness.

Art Unit: 2836

17. Claims 15-17 are rejected under 35 U.S.C. 103(a) as being unpatentable over Hipp in view of the German patent of Gerkinsmeyer (DE 199 48 798).

As to claim 15, Hipp teaches all of the claimed features, as set forth above, except for the circuit further comprising a headlight. Gerkinsmeyer, drawn to a bicycle lighting device has dynamo coupled to rechargeable battery and lighting system with front headlamp and rear tail-light, teaches a circuit for providing electrical current to a bicycle device, comprising a headlight (13) structured to be mounted to the bicycle, wherein the headlight (13) is coupled for receiving the current from the current supply circuit. It would have been obvious to one of ordinary skill in the art, at the time of the invention, to modify the circuit of Hipp to couple a headlight to the current supply circuit, as taught by Gerkinsmeyer, because the circuit of Hipp is already designed for use in a vehicle.

As to claim 16, the circuit of Gerkinsmeyer teaches a circuit for providing electrical current to a bicycle device, comprising a tail light (13) structured to be mounted to the bicycle, wherein the tail light (13) is coupled for receiving the current from the current supply circuit.

As to claim 17, the circuit components of Gerkinsmeyer are structured to receive a DC signal obtained by rectifying an AC signal derived from a dynamo (1).

Allowable Subject Matter

18. Claims 4-5 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

Art Unit: 2836

19. The following is a statement of reasons for the indication of allowable subject matter:

Claims 4 and 5 contain allowable subject matter because none of the prior art of record teaches or discloses the first and second resistances coupled in series, with the switch selectively bypassing the first resistance, in combination with the remaining claimed features.

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Hal I. Kaplan whose telephone number is 571-272-8587. The examiner can normally be reached on M-F 8:30-5:00.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Brian Sircus can be reached on 571-272-2800 x36. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

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